

## CLAIMS

### WHAT IS CLAIMED IS:

- Sub A, 7
- 5 1. An elevator system comprising  
an elevator assembly suspended by elevator ropes having ends  
suspended with respect to a rigid structure; and  
a compression member positioned with respect to said rigid  
structure in such a manner so as to counter resultant forces applied to  
10 said rigid structure due to a vertical load.
2. An elevator system according to claim 1, wherein  
said resultant forces include moment forces and inwardly-  
directed, generally horizontal tension forces.  
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3. An elevator system according to claim 1, wherein  
said compression member is generally horizontally aligned.
4. An elevator system according to claim 1, further comprising  
20 mounting brackets for attaching said elevator assembly to said  
rigid structure.
5. An elevator system according to claim 4, wherein  
said compression member is positioned between said mounting  
25 brackets.
6. An elevator system according to claim 5, wherein  
said mounting brackets are positioned on opposite sides of said  
elevator assembly.  
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7. An elevator system according to claim 4, wherein  
said elevator rope ends are suspended by said mounting  
brackets.

8. An elevator system according to claim 1, wherein said compression member comprises a rigid compression member.

Sub A27 5 9. An elevator system according to claim 1, wherein said vertical load is attributable to said elevator car.

10. An elevator system according to claim 1, wherein said elevator assembly further comprises a pair of elevator guide rails having said compression member located therebetween.

Sub B27 15 11. A method of countering load reaction forces in a rigid structure caused by a vertical load attributable to an elevator assembly suspended from said rigid structure, said method comprising providing a compression member; and positioning said compression member between points on said rigid structure from which said elevator assembly is suspended.

20 12. A method according to claim 11, wherein said compression member is positioned generally horizontally.

25 13. A method according to claim 11, wherein said compression member is positioned between bracket structures that attach elevator rope ends to said rigid structure.